TYPE: Western Mountain, Mt. Desert Island, Maine, August, 1902, *Miss E. L. Shaw* in Gray Herb.

This form includes the plants referred in eastern America to *P. vulgare*, vars. *cambricum* (L.) Willd., *semilacerum* Moore and *sinuatum* Willd. It is well illustrated by Waters, Ferns, 83 (1903), and by Buchheister, Am. Bot. v. 55, fig. 1 and 57, fig. 4 (1903).

Forma **chondroides**, n. nom. *P. vulgare*, var. *bifido-multifidum* Gilbert, Fern Bull. xiv. 39 (1906), not Druery.

Forma **alato-multifidum** (Gilbert), n. comb. *P. vulgare*, var. *alato-multifidum* Gilbert, Fern Bull. xiv. 105 (1906).

Forma **Churchiae** (Gilbert), n. comb. *P. vulgare*, var. *Churchiae* Gilbert, Fern Bull. xiv. 39 (1906).

CALAMAGROSTIS CANADENSIS AND SOME RELATED SPECIES.

O. L. INMAN.

THE species of the boreal genus *Calamagrostis* have always been difficult to separate. This has been especially true in those groups of species where the habit of the inflorescence has been used as a key-character; to a great extent the density of the panicle is determined by age, young panicles of *C. canadensis*, for example, having loosely spreading branches, while the old panicles are dense, with closely appressed branches.

In an attempt to determine if there are more fundamental characters in the section including *Calamagrostis canadensis* (Michx.) Nutt. and closely related species—see Kearney, Bull. U. S. Div. Agrost. **11**: 26–31 (1898)—the abundant material at the Gray Herbarium has been studied, and it has been found that the spikelets, as would be expected, present characters of great constancy. The results of this study are presented in the following key.

It will be noted at once that *Calamagrostis canadensis* (Michx.) Nutt. is not ascribed, as is usually done, to Beauvois as the author. While Beauvois used the name *C. canadensis* he failed to give any reference or description and according to the International Rules of Nomenclature (art. 37) his publication is not valid. After examination of a large number of specimens, mostly from eastern America and Alaska, it has become evident that the maintaining of *Cala-*

magrostis Langsdorfi as a species simply leads to confusion since the gradations or transitions from and to it, through *C. canadensis*, var. *robusta*, are so many and so close and since in all three plants the details of the spikelets are identical. These plants are, therefore, treated as variations of one species.

Callus-hairs about as long as to longer than the lemma.
  Spikelets 2.25–2.75 mm. long: awn usually attached above the middle of the lemma: palea and lemma subequal. . .*C. Macouniana.*
  Spikelets 3–5.5 mm. long.
    Awn attached at or below the middle of the lemma: palea ½–⅔ the length of the lemma
      Spikelets 3–3.5 mm. long..... *C. canadensis* (typical).
      Spikelets 3.5–4.5 mm. long..... *C. canadensis*, var. *robusta.*
      Spikelets 4.5–5.5 mm. long..... *C. canadensis*, var. *Langsdorfi.*
    Awn attached at the tip of the lemma: palea ⅔–¾ the length of the lemma.....*C. blanda.*
Callus-hairs ¼–¾ the length of the lemma, mostly few.
  Awn attached near the base of the lemma: callus-hairs ¼–⅓the length of the lemma.
    Spikelets 3.5–4 mm. long: palea ⅔–¾ the length of the lemma.....*C. perplexa.*
    Spikelets 4–5 mm. long: palea and lemma subequal.....*C. Porteri.*
  Awn attached only slightly below the middle of the lemma: callus-hairs ⅓–½ the length of the lemma: spikelets 3–4 mm long: palea and lemma subequal .....*C. Scribneri.*

CALAMAGROSTIS MACOUNIANA Vasey, Contrib. U. S. Nat. Herb. iii. 81 (1892). *Deyeuxia Macouniana* Vasey, Bot. Gaz. x. 297 (1885).

C. CANADENSIS (Michx.) Nutt Gen. i. 46 (1818). *Arundo canadensis* Michx. Fl. Bor.-Am. i. 73 (1803). *A. agrostoides* Pursh, Fl. Am. Sept. i. 86 (1814).

Var. ROBUSTA Vasey in Wheeler Rep. vi. 285 (1878). Var. *acuminata* Vasey in Rydberg & Shear, U. S. Dept. Agric. Div. Agrost. Bull. no. 5: 26 (1897).

Var. **Langsdorfi** (Link). n. comb. *Arundo Langsdorfi* Link, Enum. Pl. Hort. Berol. i. 74 (1821). *C. Langsdorffii* Trin. Gram. Unifl. 225, t. 4, fig. 10 (1824). *C. scabra* Presl, Rel. Haenk. i. 234 (1828). *Deyeuxia Langsdorfii* Kunth, Rev. Gram. i. 77 (1829). *C. hirtigluma* Steud. Syn. Pl. Gram. 188 (1855). *C. oregonensis* Buckl. Proc. Acad. Phil. 1862, p. 92 (1863), in part, acc. to Gray, ibid. 334 (1863).

C. BLANDA Beal, Grasses N. Am. ii. 349 (1896). *C. columbiensis* Nutt. ex Gray, Proc. Acad. Phil, 1862, p. 334 (1863), incidental mention in synonymy. *C. pallida* Vasey & Scribn. in Vasey, Contrib. U. S. Nat. Herb. iii. 79 (1892), not C. Muell, Annal. Bot. Syst. vi. 986 (1861), where Mueller erroneously ascribes *C. pallida* to Blytt, Norg. Fl. i. 90, Blytt having merely published *C. Pseudophragmites*, var. *pallida* the description of which Mueller literally translated.

C. PERPLEXA Scribn. U. S. Div. Agrost. Circ. no. 30: 7 (1901). *Deyeuxia Porteri* Dudley, Cayuga Fl. 125 (1886), not *C. Porteri*

Gray. *C. nemoralis* Kearney, U. S. Dept. Agric. Div. Agrost. Bull. no. 11, 26 (1898), not Phillippi (1898).

C. PORTERI Gray, Proc. Am. Acad. vi. 79 (1862). *Deyeuxia Porteri* (Gray) Vasey, Descr. Cat. Grasses U. S. 51 (1885).

C. SCRIBNERI Beal, Grasses, N. Am. ii. 343 (1896). *Deyeuxia dubia* Scribn. Bot. Gaz. xi. 174 (1886). *C. dubia* (Scribn.) Vasey, Contrib. U. S. Nat. Herb. iii. 80 (1892), not Bunge (1847). *C. Langsdorffii*, var. *Scribneri* (Beal) M. E. Jones, Contrib. West. Bot. xiv. 9 (1912).

ANTIOCH COLLEGE, Yellow Springs, Ohio.

CAREX AESTIVALIS IN THE BLUE HILLS.—Last summer I found a few vigorous tufts of a conspicuous Carex near the southerly boundary of the Blue Hills Reservation, growing on a rocky wooded slope. Submitted to Prof. Fernald this proved to be *C. aestivalis* M. A. Curtis. Number XII of the Reports on the Flora of the Boston District in RHODORA, Vol. 13, p. 233 has the following note against this species: "Lexington (*Wm. Boott*, July 2, 1876)." Gray's Manual (7th edition) says "Rocky woods, mostly on upland slopes, N. H. to Ga., rare."—NATHANIEL T. KIDDER, Milton, Massachusetts.

LEUCOJUM AESTIVUM IN DELAWARE.—*Leucojum aestivum* L. was found in Dover, Delaware, in 1921, and identified for the writer by Professor M. L. Fernald. It is thoroughly established in swampy ground near St. Jones' River. The bed is about twenty feet in area and seems to be spreading. The plant blossoms as early as April 15, and as late as May 16.—H. H. HANSON, Dover, Delaware.

The date of the June issue (unpublished as this goes to press) will be announced later.